

Washington State

2003

**Sexually
Transmitted
Disease
Morbidity**




Infectious Disease & Reproductive Health
STD/TB Services & IDRH Assessment Unit


Contents

Executive Summary	1
Data Sources and Methods.....	2
Guidelines to Prevent Misuse of Data.....	2
Glossary	3
Chlamydia	5
Figure 1. Reported Chlamydia Cases and Incidence Rates, 1992-2002	5
Table A. Chlamydia Incidence Rates by Race, 2001-2002	6
Figure 2. Age-Specific Chlamydia Incidence Rates by Gender, 2002	7
Figure 3. Chlamydia Incidence Rates by County, 2002 on Washington State Map	7
Figure 4. Chlamydia Incidence Rates by County, 2002, Ranked from Highest to Lowest	8
Gonorrhea	9
Figure 5. Reported Gonorrhea Cases and Incidence Rates, 1991-2001	9
Figure 6. Age-Specific Gonorrhea Incidence Rates by Gender, 2001	10
Table B. Gonorrhea Incidence Rates by Race, 2001-2002	11
Figure 7. Gonorrhea Incidence Rates by County, 2001 on Washington State Map	12
Figure 8. Gonorrhea Incidence Rates by County, 2001, Ranked from Highest to Lowest	12
Syphilis	13
Figure 9. Reported Syphilis Cases by Disease Stage, 2001	13
Figure 10. Reported Syphilis Cases by County, 2001 on Washington State Map	14
Figure 11. P & S Syphilis Incidence Rates/Cases, King Co. vs. Washington State, 2001	15
Figure 12. P & S Syphilis Incidence Rates by Gender, 1994-2002.....	15
Other Sexually Transmitted Diseases	16
Tables	17
Table 1. Reported Chlamydia Cases and Incidence Rates by Gender and County, 2002	17
Table 2. Reported Chlamydia Cases and Incidence Rates by Age (15-24 years) and County, 2002	18
Table 3. Reported Gonorrhea Cases and Incidence Rates by Gender and County, 2002	19
Table 4. Reported Gonorrhea Cases and Incidence Rates by Age (15-24 years) and County, 2002	20
Table 5. Reported STD Cases and Incidence Rates by Disease and County, 2002	21
Appendix	23

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to Protect and Improve
the Health of People in Washington State



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Executive Summary

The 2003 annual Sexually Transmitted Disease (STD) summary includes morbidity data and incidence rates for Washington State's legally reportable STDs. These include gonorrhea, chlamydia, syphilis, herpes simplex-initial genital infection, chancroid, lymphogranuloma venereum (LGV) and granuloma inguinale (GI). Sexually transmitted diseases are the most commonly reported communicable diseases in Washington State.

Chlamydia

In 2003, chlamydia continued to be the most commonly reported STD in Washington State. Reported cases totaled 16,796, yielding a statewide incidence rate of 275.4 per 100,000 persons. As in past years, females continue to be selectively tested more frequently and, consequently, diagnosed at a higher rate than males. The statewide chlamydia incidence rate for females was 403.2 per 100,000, which was almost three times the incidence rate for males — 146.7 per 100,000. Chlamydia cases reported and incidence rates increased in calendar year 2003 by 12.4% and 11.4% respectively over those observed in 2002. This rate of increase is consistent with trends observed over the last 6 years and warrants renewed efforts by providers and the public health community to increase screening among those at risk and to enhance partner treatment for those infected.

Gonorrhea

In 2003, reported gonorrhea cases decreased for the second year in a row to 2,754 from the 2,925 cases reported in 2002. This represents a statewide gonorrhea incidence rate of 45.2 per 100,000 persons, a decrease of 6.6% from 2002. Gonorrhea screening is universal in all public STD clinics in Washington State; incidence rates are thought to accurately reflect true disease incidence. The female gonorrhea rate in 2003 was 38.1 per 100,000 and the male gonorrhea rate was 52.3 per 100,000. The gonorrhea incidence rate among both males and females decreased slightly from 2002. The male-to-female gonorrhea case ratio in 2003 was 1.36 to 1, a decrease of 6% from 2002. The male to female ratio provides continuing evidence for a continuing gonorrhea outbreak among men who have sex with men (MSM).

Syphilis

Primary, secondary, and early latent cases of syphilis totaled 118 in 2003, an increase of 25 cases from 2002. Of the 118 early syphilis cases, 84 (71%) were reported from King County. The statewide primary and secondary syphilis rate is 1.3 per 100,000 in 2003, an increase of 8% from 2002. When cases of late latent/late syphilis are included in this calculation, the statewide syphilis rate has increased to 3.9 per 100,000, a significant increase in the overall syphilis rate observed in 2002. The number of primary and secondary cases statewide was 82 in 2003, an increase of 17% from P & S syphilis reported in 2002. No cases of congenital syphilis were reported in 2003.

Other STDs

In 2003, 2,071 cases of initial genital herpes and 2 cases of neonatal herpes (infection in infants < 1 year in age) were reported, yielding an incidence rate of 34.0 per 100,000 population. One case of lymphogranuloma (LGV) and no cases of chancroid or granuloma inguinale (GI) were identified in 2003.

Data Sources, Methods and Limitations

Public and private health care providers complete confidential case reports, which are submitted to local health jurisdictions. These reports are subsequently forwarded to the Washington State Department of Health, STD/TB Services Section and are the primary data source for reported cases of sexually transmitted diseases. Chlamydia, gonorrhea, and syphilis require laboratory confirmation to be counted. Genital herpes may be reported without laboratory confirmation.

A wide variety of persons and agencies submit confidential case reports and the quality and usefulness of specific data elements can vary widely. Information on race and ethnicity are often missing and should be considered unreliable in quantitative analysis. Other data are completely reported, e.g., provider of care, age, sex and county of residence. In 1998, the confidential database that houses STD case report information was modified to be dynamic, allowing for case reports to be corrected or changed as new information on identified cases becomes available. Because of this change, the statistics in this report are for STD case information known as of January 28th, 2003.

Crude incidence rates (number of cases/population) were calculated on an annual basis per 100,000 persons. In this report the 2002 rates for all Washington counties were calculated by dividing the number of cases reported for that county in 2002 by the projected 2002 county-specific population (projections by OFM based on the 2000 census and obtained in February of 2003). Rates were not calculated for counties reporting five or fewer cases because rates based on low case-counts are considered statistically unreliable. Crude rates are used for the purposes of this report because age-adjusted rates may mask important trends and may result in over- or under-estimation of the true burden of disease.

Data Limitations - Clinically diagnosed cases of STDs (with laboratory confirmation) may be under reported through this surveillance system. Presumptively diagnosed cases in some instances may not be completely reported, as is also the case with asymptomatic cases not presenting with an STD-related illness. However, clinical practice recommendations from the Centers for Disease Control and Prevention (CDC) state all bacterial STDs should receive laboratory confirmation. Depending upon diagnosing practices, completeness of reporting may vary by source of health care, particularly private versus publicly funded sources of care. Some items are known to be under-reported or misreported, e.g., race, ethnicity. Care should be exercised in interpreting these data in light of known data limitations.

Guidelines to Prevent Misuse of Data

Ready access to data by persons unfamiliar with the sources or unacquainted with epidemiology and statistics may lead to misinterpretation or misrepresentation of information. This could result in inappropriate decision-making and potential misdirection of resources. The following guidelines may help prevent data misuse and should always be considered when reviewing data from any source:

1. Data presented in this report represent new, incident infections reported during 2002, not persons.
2. Data presented in this report are based on cases reported to local health jurisdictions and to the STD/TB Services Section, Infectious Disease & Reproductive Health, Washington State Dept. of Health. These data are representative of infections among persons receiving/seeking care for symptomatic and asymptomatic STDs, reproductive health services or other care.

3. Small increases and decreases in numbers can look disproportionately large if the actual number of cases is small. For example, if two cases of chlamydia are counted in a particular county in one year and three cases are counted in the next year, this is an increase of 50%. This may sound significant, but a change of one case is not. Caution is warranted.

We encourage anyone with specific questions about how these data should be interpreted to contact STD/TB Services at (360) 236 - 3460.

Glossary

Age-Specific Incidence Rate - An age-specific rate is a rate in which the number of events and population at risk are restricted to an age group [e.g., the numerator (reported cases) and the denominator (mid-year population at risk) refer to a specific age group]. Age-specific rates are useful in comparing age-defined subgroups when rates are strongly age-dependent, as is the case with sexually transmitted diseases.

Case - An episode of disease. If a person is diagnosed with more than one STD in a year, each infection is counted as a separate case.

Confidence Interval - The confidence interval (CI) evaluates the influence of chance or random variability on the statistical estimate or rate (Selvin, 1996). Surveillance data, even based on complete counts, may be affected by chance. If variation in the occurrence of the disease is essentially random and not affected by differences in diagnosing or reporting, then confidence intervals may be calculated to facilitate comparisons over time, between groups, or between geographic locations (e.g., counties). In this situation, calculated confidence intervals should be based on a Poisson probability distribution. In general, if confidence intervals for two separate rates overlap, there is no statistically significant difference between the two rates.

Narrow confidence intervals for rates indicate greater certainty that the calculated rate is a reliable approximation of the true rate. Conversely, wide confidence intervals signal greater potential variability and less certainty that the calculated rate is a good estimate of the true rate.

Crude Rate - The number of events, e.g., reported cases, divided by the total mid-year population. This rate is not “adjusted” or “standardized” for different population discrepancies. In general, no rates should be calculated if the number of events is fewer than five because the rates are considered unstable. Incidence rates allow comparisons between two or more populations by standardizing the denominator and are the most appropriate statistic to use when investigating differences between groups.

Denominator - The lower portion of a fraction used to calculate a rate or ratio; usually, this is the mid-year population. The source for denominator data used in this report was: Washington State Adjusted Population Estimates, Office of Financial Management, Feb, 2004.

Numerator - The upper portion of a fraction used to calculate a rate or a ratio, e.g., new cases identified and submitted by providers to local health jurisdictions and forwarded to the State Department of Health, STD/TB Services Section.

Race and Ethnicity - The STD confidential case report includes race and ethnicity as two separate categories. Race options include White, Black, Asian, Native Hawaiian/Other Pacific Islander, American Indian/Alaska Native, and Other/Unknown. Ethnicity options include Hispanic, Non-Hispanic, and Unknown. Following

the enumeration technique of the United States Census Bureau and the Washington State Center for Health Statistics, race and ethnicity are counted separately. For example, if a case report indicates “White” and “Hispanic”, the case is counted both as White and as Hispanic. However, historical practice in disease surveillance by the Centers for Disease Control and Prevention often treats Hispanic as a racial category. In light of this difference, care must be taken in comparing Washington State data with national or other state data. Disease rates in this report are presented only in tabular form by race and ethnicity using categories employed on the 2000 census, in part due to the uncertainty in bridging Census 2000 and historical race & ethnicity categories and the high proportion of missing race and ethnicity data on STD case reports.

Chlamydia

Chlamydia trachomatis is the most commonly reported bacterial STD in the United States. Estimates indicate approximately 3 million new infections each year (Kaiser Family Foundation, 1998), of which only a fraction, 834,555 were reported to CDC in 2002. Chlamydia infections in women and in many men are often asymptomatic, leaving a large proportion of infected individuals with little or no reason to seek screening and/or treatment. Comprehensive screening and treatment of infected individuals, as well as timely identification and treatment of infected partners, have been shown to significantly reduce the prevalence of chlamydial infections. Re-testing of infected individuals at 10 to 12 weeks post-treatment (*not* test-of-cure but screening for subsequent infection) can also be highly effective in identifying repeat infection and should be adopted as a standard of care for patient management.

Since 1988, Washington State has participated in chlamydia screening and prevalence monitoring activities through the Infertility Prevention Project (IPP). All women attending STD clinics, and women seeking reproductive health services in other facilities who meet selective screening criteria, are the population targeted for chlamydia screening through the IPP. Genital tract chlamydial infections are a major cause of pelvic inflammatory disease (PID), ectopic pregnancy and infertility among women; thus IPP efforts are directed specifically at the female population. Recent efforts at improving the standard of care for male partners of infected women have resulted in increased reporting of male cases. More sensitive testing methods for detecting chlamydial infection in cervical specimens from women and in less invasive urine samples from men have recently become widely available, which may have resulted in elevated reporting of cases.

State-Level Chlamydia Trends

Figure 1 reports the number of chlamydia cases and the calculated incidence rate for Washington State 1993 to 2003. After significant declines through the mid 1990s, reported chlamydia cases have increased steadily since 1996. Though the number and rate of chlamydia infection has increased over the last six years, the incidence rate for Washington State, 275.4 per 100,000 persons continues to remain somewhat below the most recently reported national incidence rate of 296.5 per 100,000 for 2002 (CDC, 2003).

Figure 2 presents the age-specific incidence rate by gender for chlamydia cases reported in Washington State in 2003. Of immediate note in this figure are the disproportionate incidence rates among younger women versus young men:

- Peak female age-specific rates in 15-19 year olds at 2,273.3 per 100,000
- Peak male age-specific incidence in 20-24 year olds, 768.5 per 100,000
- 71.8% of all cases reported among 15-24 year-olds in 2003
- Age-specific incidence rate increased 11.5% from 2002 among females 15-19
- Age-specific incidence rate increased 10.5% from 2002 among males 20-24

The overall rate of chlamydia among women in 2003 is observed to be 403.2 per 100,000 while the male rate continues to be considerably lower than females at 146.7 per 100,000. Males diagnosed with nongonococcal urethritis (NGU) or presenting with other symptomatic conditions are often treated for chlamydia presumptively; no laboratory tests are performed and no case report is completed. Laboratory confirmation of chlamydia infection requires a report to the local health jurisdiction and the Department of Health. For this reason, chlamydia may be significantly under-reported among males. In light of this, and

Figure 1. Reported Chlamydia Cases and Incidence Rates*, (95%CI**), Washington State 1993-2003

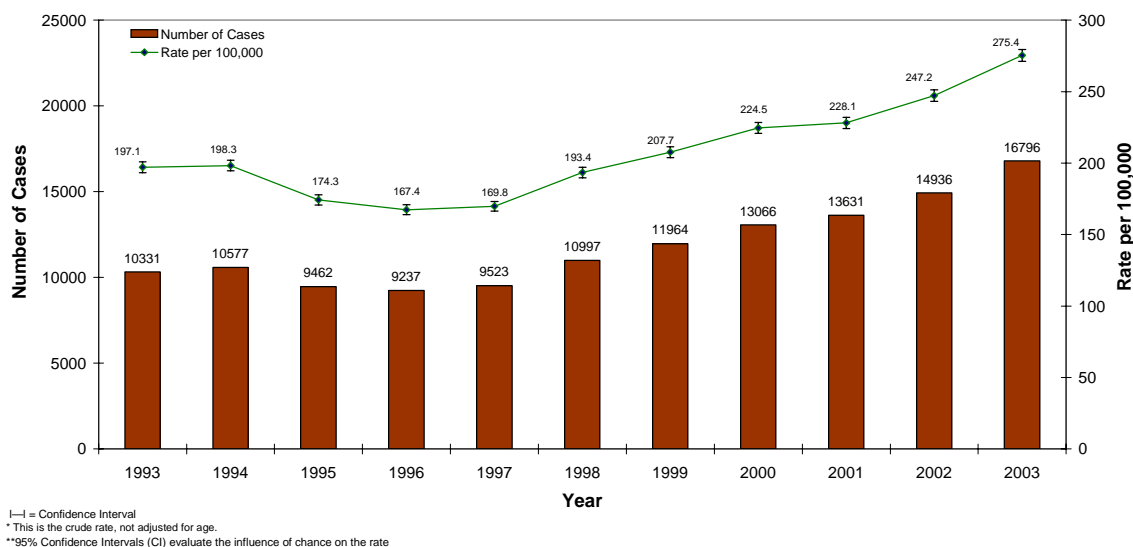
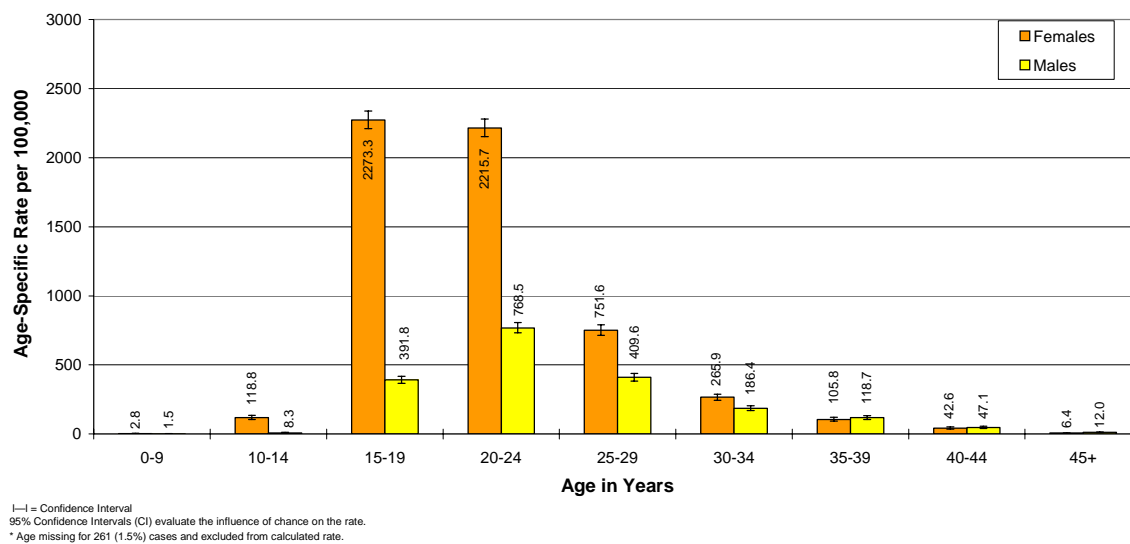


Figure 2. Age-Specific Chlamydia Incidence Rates* by Gender, Washington State, 2003



the well-documented disparity in screening males versus females in reproductive health settings, the true chlamydia morbidity may be much closer to 1:1 for males and females.

A significant proportion of chlamydia cases were reported without race (18.8%) and ethnicity (27.6%) information in 2003. No statistically meaningful statements relating to relative difference or similarity in rates between race and ethnicity can be made given these missing data; however, Table A (below) presents race and ethnicity data in categories as introduced by the Census Bureau in the 2000 Census. STD case reports were changed to reflect these new race schema in 2001 and rates calculated using this new system are also presented in Table A.

Table A: Chlamydia Cases and Rates by Census 2000 Categories for 2002 & 2003

Race Category	Cases in 2002*	Rate per 100,000**, 2002	Cases in 2003*	Rate per 100,000**, 2003
White	8,235	166.6	9,313	176.5
Black	2,320	1,189.60	2,175	1,010.60
Native American	587	613.8	565	561.3
Alaska. Native				
Asian	648	196.1	605	164.7
Native Hawaiian	194	790.2	181	660.4
Other Pacific Islander				
Other Race	377	160.7	384	205.9
Multiple Race	260	118.8	414	230.8
Hispanic Origin***	2,138	472.4	2,435	474.2

• Race data missing for 19.2%, ethnicity data missing for 27.8% of cases in 2002,

• Race data missing for 18.8%, ethnicity data missing for 27.6% of cases in 2003,

* Due to multiple race option, total may exceed number of reported cases.

** Denominators Washington State Adjusted Population Projections based on OFM population growth estimates, Feb 2004.

***Ethnicity not exclusive of race, i.e. cases can be counted as both White and Hispanic

Lack of a true consensus on a biological basis for race and absence of truly objective standards for racial/ethnic classification in disease surveillance, argues for a cautious approach to interpreting disease incidence rates by race or ethnicity. Race and ethnicity may also be correlated with other potentially significant ecological determinants of health status, such as socio-economic status, geographic variation in access to health care services, and sexual mixing patterns; analysis by race and ethnicity may be confounded by these unknown factors.

County-Level Chlamydia Trends

To assess the burden of disease and compare this burden across counties of differing population sizes, county-specific incidence rates were calculated (**Figure 3**). Thirty-six of Washington's 39 counties reported at least five cases of chlamydia in 2003. **Figure 4** shows these county-specific incidence rates ranked from highest to lowest.

Chlamydia incidence rates for males and females by county are presented in **Table 1** (pg. 17). The largest number of chlamydia cases (5,169) was reported by King County. King County also reported the largest number of male cases (1,734); however, the highest male incidence rate, 203.3 per 100,000, was reported for Pierce County. King County reported the largest number of female chlamydia cases (3,435), and the female incidence rate, 384.4 per 100,000 for females in King County, was ranked eleventh among counties

in Washington State. The highest county-specific incidence rate for chlamydia among women was Yakima County with a rate of 668.0 per 100,000. Due to under-diagnosing, under-reporting, and the asymptomatic nature of the disease, chlamydia incidence rates are considered conservative. These assumptions make county-to-county comparisons generally unreliable, especially among counties with relatively small populations.

Figure 3. Chlamydia Incidence Rates* by County, Washington State, 2003

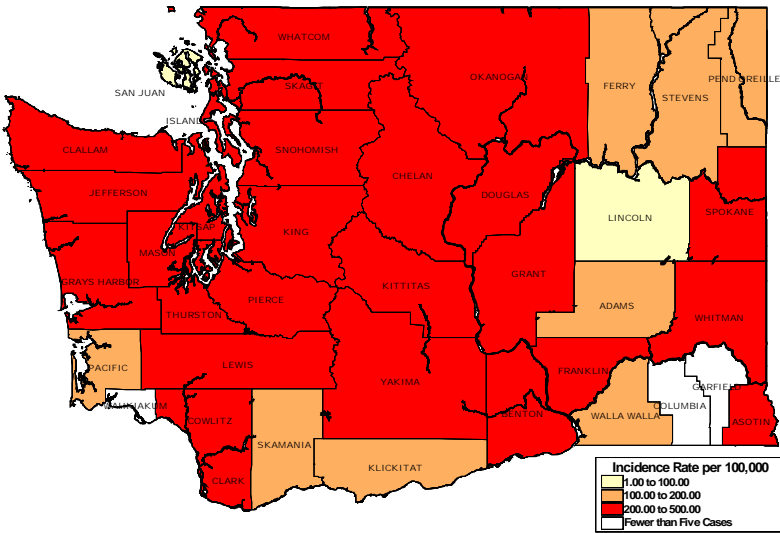
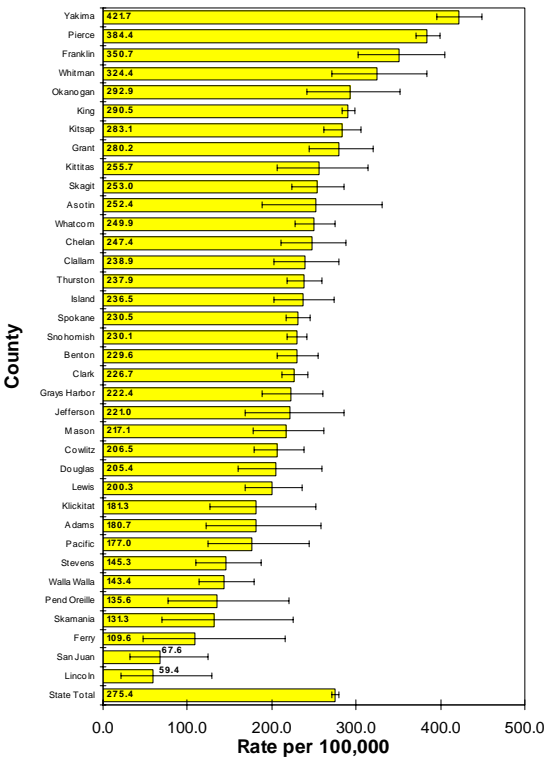


Figure 4. Chlamydia Incidence Rates* by County, (95%CI)**, Washington State, 2003, Ranked from Highest to Lowest



Gonorrhea

Infections due to *Neisseria gonorrhoeae* remain a major cause of morbidity in the United States. Negative consequences of gonorrhea infection may include pelvic inflammatory disease (PID), infertility, ectopic pregnancy, and chronic pelvic pain. Epidemiologic studies provide strong evidence that gonococcal infections may also facilitate HIV transmission.

State-Level Gonorrhea Trends

The national gonorrhea rate declined 73.8% from 1975 through 1997 (CDC 2003) and since that time has remained relatively stable at around 130 cases per 100,000 population. In Washington State, gonorrhea incidence also declined through 1998 but increased 46% to a high of 50.1 per 100,000 in 2001. The reported gonorrhea rate in 2003 is 45.2 per 100,000, a decrease of 6.6% from rates observed in 2002 and the second annual decrease in rates since 2001 (**Figure 5**).

- Gonorrhea incidence is observed to be highest in the 20 – 24 age group for both males and females (176.9 and 165.4 per 100,000, respectively)
- The statewide increase noted from 1998 to 2001 is influenced in part by documented increases in gonorrhea infection among men-who-have-sex-with-men (MSM) in Western Washington.
- Statewide male-to-female case ratio in 2003 is 1.34 to 1, a slight decrease from 2002.

Gonorrhea among MSM reported from counties in western Washington continues to be a cause for concern. In King County in 2003, the male to female case ratio increased to 2.42 male cases for each female case compared to a statewide male-to-female ratio of 1.34. Gonococcal infections in MSM reported by the Public Health – Seattle & King County (PHSKC) STD Clinic more than doubled from 1997 to 1998. Recent registry matching projects have determined that at least 5.6% of incident GC cases statewide were also HIV+ in 2002, a troubling finding given the likelihood that GC infection significantly augments transmissibility of HIV.

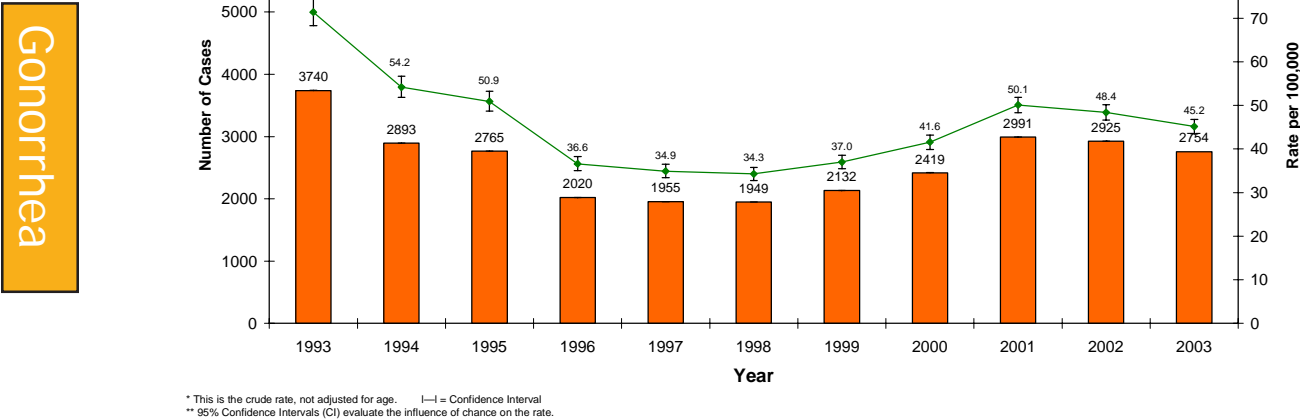
It has been estimated that the rate of gonococcal infection in MSM in King County increased from 155 per 100,000 in 1994 to 727 per 100,000 in 2002, in contrast to the rate among presumed heterosexuals in King County of 82 per 100,000 (M Golden, 2003, personal communication).

The age distribution of gonorrhea differs between genders and age groups as seen in **Figure 6**. Nationally, gonorrhea incidence for females is highest among 15-19 year-olds and among males 20-24 year-old. For Washington State the peak incidence rate for both males and females is observed in the 20-24 year old age group; however, females 15 –19 experience similar incidence rates.

Statewide, the greatest incidence of disease among females, 62.3% of total female morbidity in 2003, is among 15-24 year olds, while for males the burden of disease is distributed more evenly among those 25 and older. Males had a higher gonorrhea incidence rate (52.3 per 100,000) than females in 2003 (38.1 per 100,000). A major factor contributing to the different distribution of gonorrhea incidence in different age groups among men and

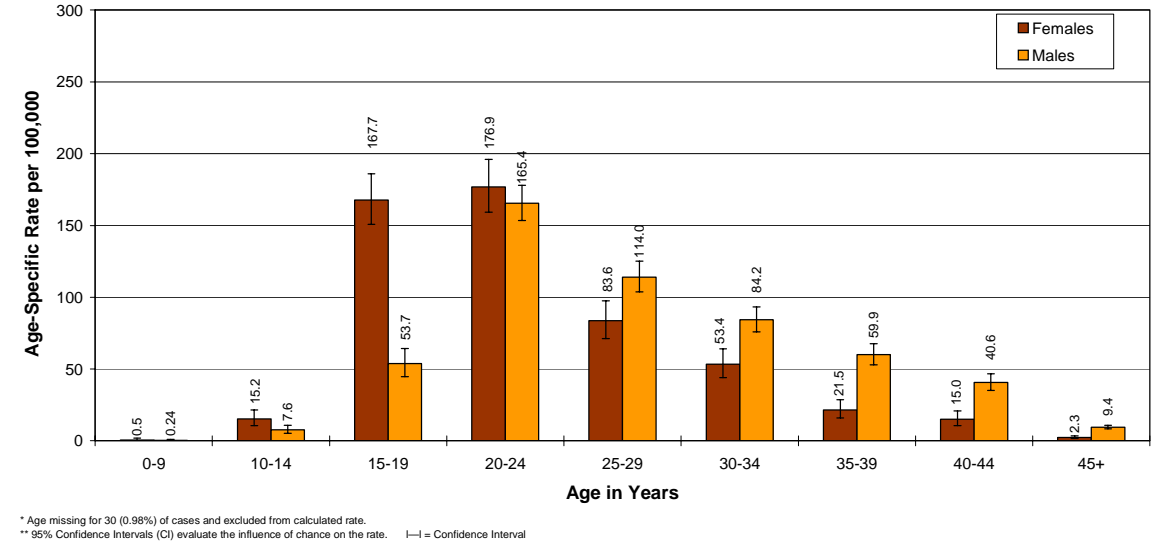
women is the documented outbreak among MSM whose median reported age was 30 (*ibid*). Gonococcal infection appears to be endemic in core MSM populations and recent evidence suggests that a greater proportion of infections in the overall population may be asymptomatic than previously assumed (Turner, Rogers, Miller, et al. 2002).

Figure 5. Reported Gonorrhea Cases and Incidence Rates*, (95%CI**), Washington State 1993-2003



In Washington State, racial disparities in disease burden clearly continue to exist. However, a decrease in rate is noted among Blacks from 444.1 per 100,000 in 2002 to 317.8 in 2003. In 2003, 20.3% of reported cases of gonorrhea were missing race data and 29.2% of case reports were missing ethnicity data. Given the high proportion of cases missing these data, no meaningful statements relating to relative difference or similarity in rates between these groups can be made, with the exception that rates observed for Blacks continue to exceed those of

Figure 6. Age-Specific Gonorrhea Rates* (95% CI)** by Gender, Washington State, 2003



other racial groups by a significant percentage despite the decline in Blacks noted previously. Table B shows reported cases and incidence rates calculated for the Census 2000 race categorization.

Table B: Gonorrhea Cases and Rates by Census 2000 Categories for 2002 & 2003

Race Category	Cases in 2002*	Rate per 100,000**, 2002	Cases in 2003*	Rate per 100,000**, 2003
White	1,323	26.8	1,259	23.9
Black	866	444.1	684	317.8
Native American	88	92	76	75.5
Alaska Native				
Asian	77	23.3	54	14.7
Native Hawaiian	30	122.2	22	80.3
Other Pacific Islander				
Other Race	49	20.9	41	22
Multiple Race	59	27	57	31.8
Hispanic Origin***	216	47.7	251	48.9

Race data missing for 19.1%, ethnicity data missing for 28.6% of cases in 2002.

Race data missing for 20.3%, ethnicity data missing for 29.2% of cases in 2003

* Due to multiple race option, total will exceed number of reported cases.

** Denominators Washington State Adjusted Population Projections based on OFM population growth estimates, Feb 2004.

***Ethnicity not exclusive of race, i.e. cases can be counted as both White and Hispanic.

Lack of a true biological basis for race and no objective standards for racial/ethnic classification in disease surveillance argues for a cautious approach to interpreting disease incidence rates by race or ethnicity. Race and ethnicity may be correlated with other potentially significant ecological determinants of health status, such as socio-economic status, geographic variation in access to health care services, and sexual mixing patterns; analysis by race and ethnicity is confounded by these unknown factors.

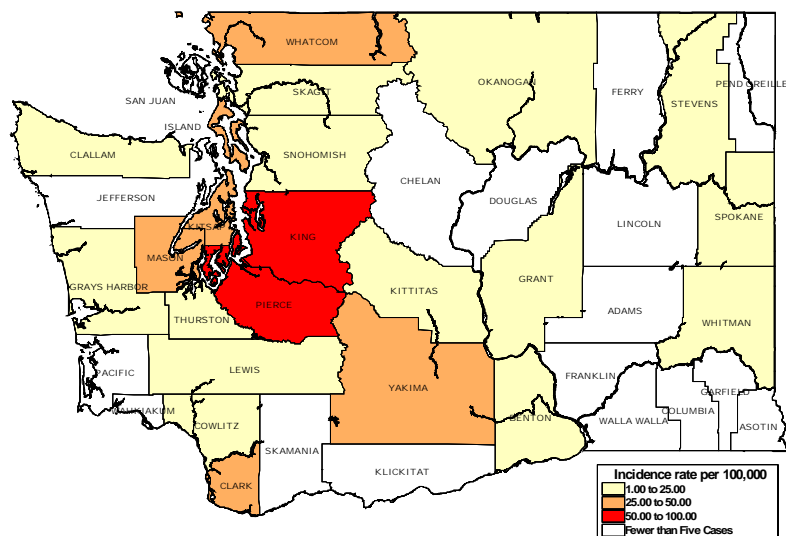
County-Level Gonorrhea Trends

The distribution of gonorrhea not only differs by gender, age, and race, as noted above, it also differs by geography. At the county-level, gonorrhea incidence impacts dense urban versus rural counties differently (Figures 7 & 8):

- Highest gonorrhea incidence rate is observed for King County at 75.9 per 100,000
- Pierce County has the second highest observed rate at 73.3 per 100,000
- Yakima and Clark Counties are observed to have the third and fourth highest rates in Washington State respectively, close to the statewide rate of 45.2 per 100,000

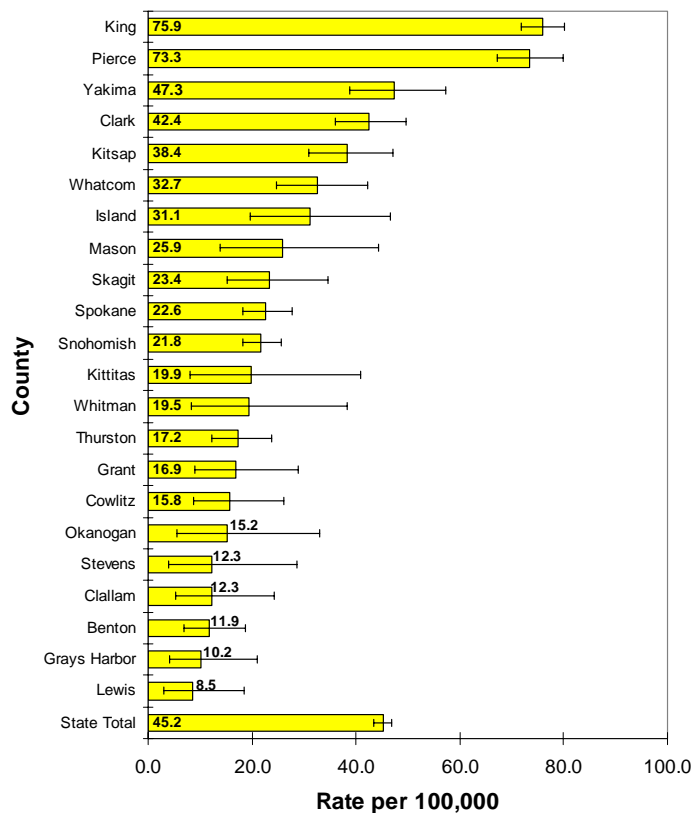
To further illustrate the differences in gonorrhea disease burden across counties, gender-specific and age-specific rates were calculated. Gonorrhea incidence rates for males and females by county are presented in **Table 3** (Pg.19). For many counties in Washington State, there were either no gonorrhea cases or too few cases to calculate a stable incidence rate by gender. Among the 14 counties with sufficient cases to allow calculation of a gender-specific incidence rate, Pierce County had the highest rate for females at 76.2 per 100,000 and King County had the highest rate for males at 108.1 per 100,000 providing further evidence for the ongoing gonorrhea epidemic among MSM.

Figure 7. Gonorrhea Incidence Rates* by County, Washington State, 2003



Gonorrhea

Figure 8. Gonorrhea Incidence Rates* by County, (95%CI)**, Washington State, 2003, Ranked from Highest to Lowest

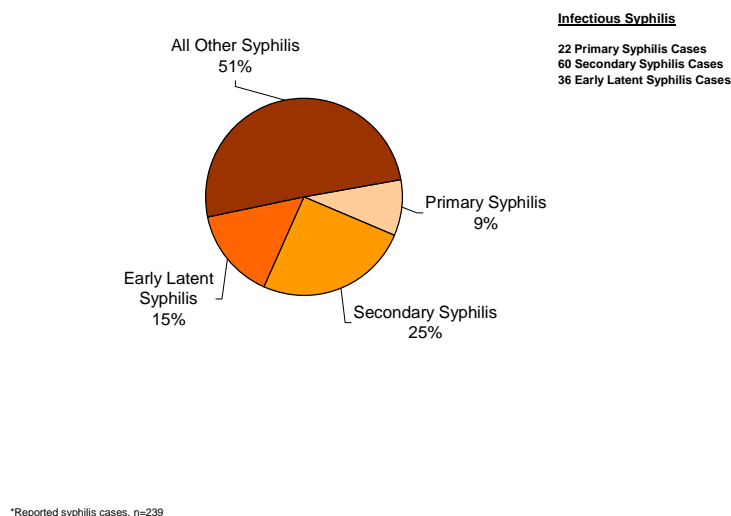


* This is the crude rate, not adjusted for age. Counties with fewer than 5 cases not shown. —|— = Confidence Interval
 ** 95% Confidence Intervals (CI) evaluate the influence of chance on the rate.

Syphilis

Syphilis is caused by infection with the spirochete (a slender, spiral-shaped, highly mobile bacteria) *Treponema pallidum*, and has four distinct stages - primary, secondary, latent and late latent. A painless genital ulcer that will resolve spontaneously without treatment characterizes primary syphilis infection. Secondary infection most commonly presents as a rash of varying duration, which may be recurrent. An infected person who does not get treatment may infect others during the first two stages (primary, secondary). Early latent syphilis is defined as an infection that is less than one year in duration and primary, secondary and early latent infection are also perinatally infectious. A relapse in secondary symptoms is also considered an early latent infection. Trans-placental transmission of syphilis is a potential cause of fetal loss and congenital abnormalities. In the late latent stage, untreated syphilis, although not contagious, can cause serious heart abnormalities, mental disorders, blindness, other neurological problems and death. All four stages of syphilis were reported in Washington State in 2003 (**Figure 9**).

Figure 9. Syphilis cases by Disease Stage*, Washington State, 2003



- Incidence rate for P & S syphilis increased slightly to 1.3 per 100,000 in 2003.
- An outbreak of syphilis among men who have sex with men in King County continues unabated; evidence suggests that 2/3 or more of these men are HIV+.

Of 82 primary and secondary syphilis cases reported in 2003, 60 (73.2%) were reported from King County (**Figure 11**). This pattern has been observed since 1997 in contrast to previous outbreaks where a greater proportion of cases were reported from counties other than King County. There continues to be a large disparity

between male and female rates (**Figure 12**), which strongly suggests that the ongoing syphilis outbreak in Seattle-King County involves primarily MSM. Only six female cases of early syphilis were reported in 2003, and four of these cases were reported from outside of King County. No cases of congenital syphilis were reported in 2003 in Washington State.

In 1996, King County reported only a single case of P & S syphilis. In 2003, 60 cases of P & S syphilis were reported from King County. As noted above, this outbreak continues to be centered primarily among men who have sex with men. It has been proposed that the transmission behaviors responsible for this outbreak have occurred primarily in anonymous and multi-partner sex environments and at least two-thirds of these cases are also HIV positive. These findings strongly reinforce the importance of routine screening of MSM for STDs in primary HIV care settings.

Cases of primary, secondary and early latent syphilis reported statewide in 2003 increased 26.9% from cases reported in 2002. Of note in **Figure 9** is the 2.7 to 1 proportion of secondary stage disease versus primary syphilis reported in 2003. The fact that there is a larger proportion in the secondary stage of disease suggests that there continues to be an unrecognized burden of disease in the community and that continued surveillance, education and sustainable interventions are necessary for the control of infectious syphilis.

Figure 10. Number of Early Syphilis Cases (Primary, Secondary & Early Latent), Washington State, 2003

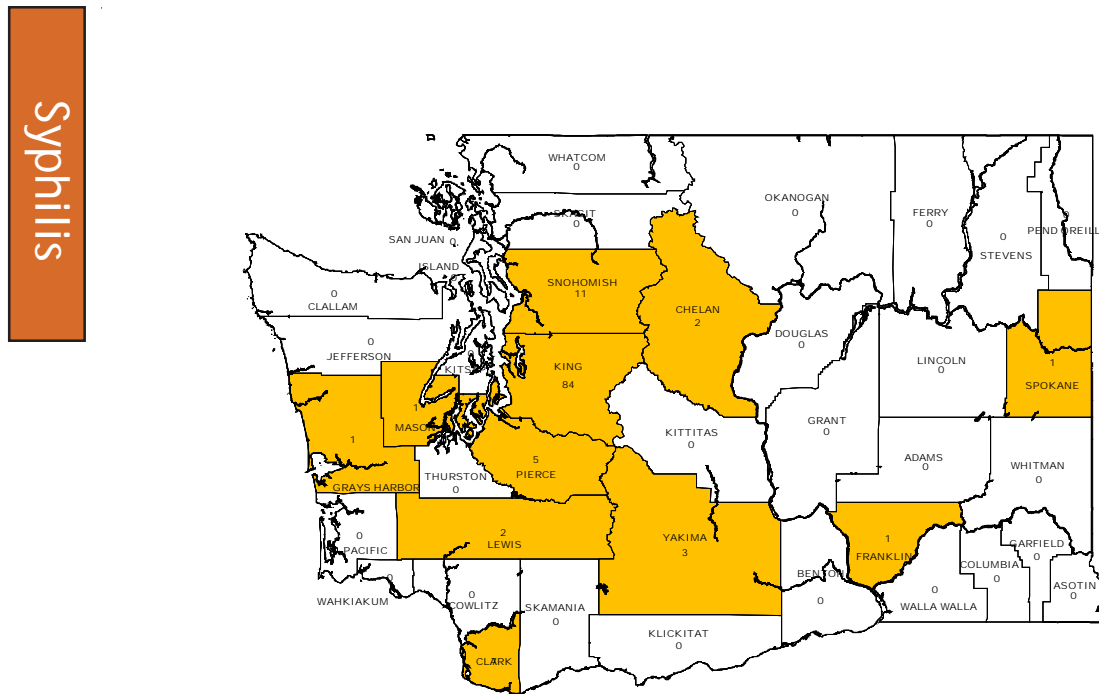


Figure 11. Reported Primary & Secondary Syphilis Cases, King County and Washington State, Statewide Incidence Rate* 1993-2003

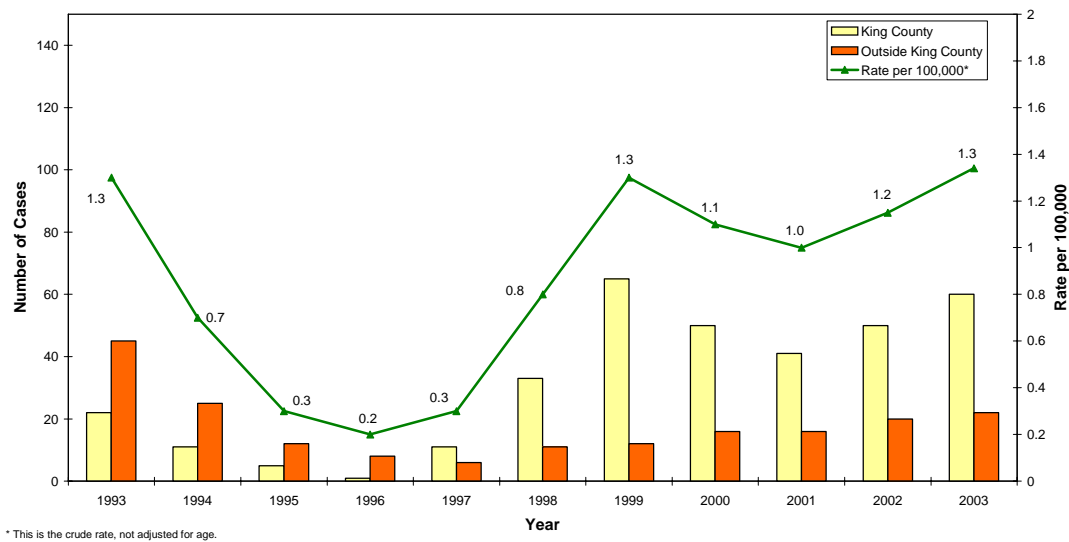
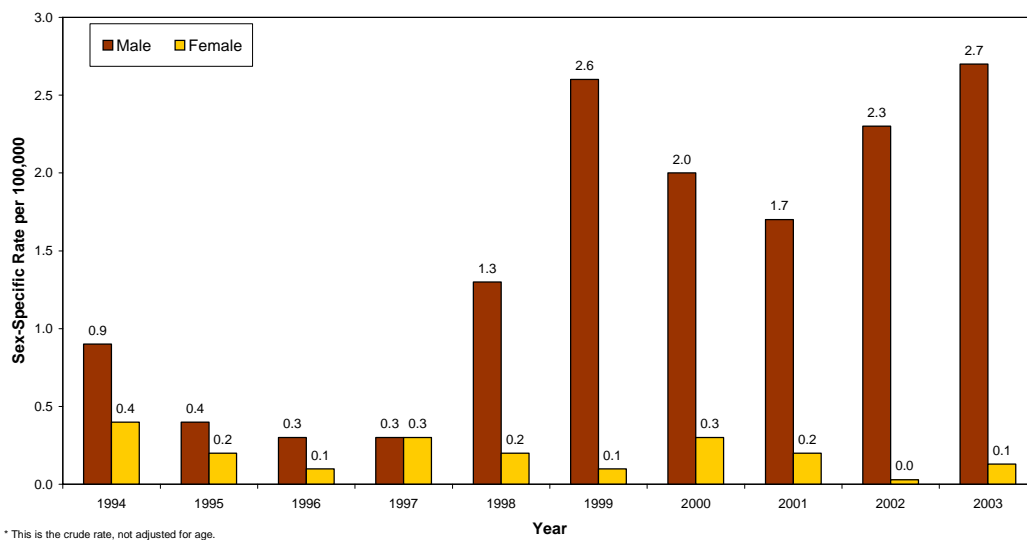


Figure 12. Primary & Secondary Syphilis Incidence Rates*, Males vs. Females, Washington State, 1994-2003



Other STDs

In addition to chlamydia, gonorrhea, and syphilis there are four additional STDs that are currently reportable to the state Department of Health. Initial genital herpes infection, chancroid, lymphogranuloma venereum (LGV), and granuloma inguinale (GI) currently require reporting by health care providers.

Genital Herpes, Initial Infection

Washington State is one of a handful of states that require reporting of initial infection of genital herpes. Only the initial infection is tracked in the state surveillance system. In 2003, 2,071 cases of initial herpes infection and two cases of neonatal herpes were reported (34.0 per 100,000 persons). Unlike chlamydia and gonorrhea, a suspected herpes infection does not require laboratory confirmation in order for the case to be reported to the state health department. Given recent CDC estimates of genital herpes prevalence in the United States, cases of initial genital herpes reported in Washington State are most likely an underestimation of true incidence.

Others

Chancroid, LGV, and GI are very rare STDs. A total of 67 cases of chancroid were reported nationwide in 2002; South Carolina reported 64.2% of this total. No cases of chancroid or GI were reported in Washington State in 2003. One case of LGV was identified and reported in Washington State in 2003.

Table 1
Reported Chlamydia Cases and Incidence Rates
By Sex and County

COUNTY	2003 POPLUATION		CHLAMYDIA			
	MALE	FEMALE	MALE	RATE/100,000	FEMALE	RATE/100,000
Adams	8,485	8,115	11	129.6	19	234.1
Asotin	9,820	10,780	13	132.4	39	361.8
Benton	75,396	76,204	73	96.8	275	360.9
Chelan	33,827	34,073	39	115.3	129	378.6
Clallam	32,287	33,013	27	83.6	129	390.8
Clark	184,870	187,430	215	116.3	629	335.6
Columbia	2,001	2,099	1	*	0	0.0
Cowlitz	47,052	47,848	32	68.0	164	342.8
Douglas	16,663	16,937	17	102.0	52	307.0
Ferry	3,789	3,511	1	*	7	199.4
Franklin	27,996	24,604	35	125.0	153	597.6
Garfield	1,190	1,210	0	0.0	0	0.0
Grant	39,438	37,662	40	101.4	176	467.3
Grays Harbor	34,216	34,584	26	76.0	127	367.2
Island	37,062	36,938	45	121.4	130	351.9
Jefferson	13,254	13,446	15	113.2	44	327.2
King	885,652	893,648	1,734	195.8	3,435	384.4
Kitsap	120,124	116,876	146	121.5	525	449.2
Kittitas	17,494	17,706	23	131.5	67	378.4
Klickitat	9,639	9,661	13	134.9	22	227.7
Lewis	34,922	35,478	29	83.0	112	315.7
Lincoln	5,010	5,090	0	0.0	6	117.9
Mason	25,951	24,249	31	119.5	78	321.7
Okanogan	19,755	19,845	23	116.4	93	468.6
Pacific	10,366	10,534	12	115.8	25	237.3
Pend Oreille	5,932	5,868	3	*	13	221.5
Pierce	365,053	368,647	742	203.3	2,078	563.7
San Juan	7,226	7,574	1	*	9	118.8
Skagit	52,860	53,840	49	92.7	221	410.5
Skamania	4,987	4,913	3	*	10	203.5
Snohomish	319,084	318,416	374	117.2	1,093	343.3
Spokane	210,392	218,208	205	97.4	783	358.8
Stevens	20,233	20,367	9	44.5	50	245.5
Thurston	105,259	109,541	126	119.7	385	351.5
Wahkiakum	1,902	1,898	0	0.0	3	*
Walla Walla	28,413	27,387	18	63.4	62	226.4
Whatcom	86,029	88,471	87	101.1	349	394.5
Whitman	20,761	20,239	40	192.7	93	459.5
Yakima	112,820	113,180	197	174.6	756	668.0
STATE TOTAL	3,037,210	3,061,090	4,455	146.7	12,341	403.2

*Rates are not calculated from 0 to 4 cases because they are unreliable.

Table 2
Reported Chlamydia Cases and Incidence Rates
By Age (15-24 Years) and County

COUNTY	2003 POPULATION		CHLAMYDIA			
	15-19	20-24	15-19	RATE/100,000	20-24	RATE/100,000
Adams	1,500	1,152	9	600.0	7	607.6
Asotin	1,508	1,169	20	1,326.3	23	1,967.5
Benton	12,340	9,170	138	1,118.3	136	1,483.1
Chelan	5,239	3,917	61	1,164.3	65	1,659.4
Clallam	4,459	3,045	57	1,278.3	61	2,003.3
Clark	26,667	23,041	263	986.2	309	1,341.1
Columbia	292	197	1	*	0	0.0
Cowlitz	6,892	5,637	81	1,175.3	70	1,241.8
Douglas	2,654	1,875	23	866.6	31	1,653.3
Ferry	686	340	5	728.9	3	*
Franklin	4,879	4,257	67	1373.2	68	1,597.4
Garfield	203	78	0	0.0	0	0.0
Grant	6,689	5,366	79	1,181.0	81	1,509.5
Grays Harbor	5,203	3,763	69	1,326.2	45	1,195.9
Island	4,843	4,823	57	1,177.0	75	1,555.0
Jefferson	1,543	902	18	1,166.6	22	2,439.0
King	110,138	127,018	1,654	1,501.8	1,790	1,409.2
Kitsap	17,387	16,319	233	1,340.1	297	1,820.0
Kittitas	3,380	5,820	25	739.6	49	841.9
Klickitat	1,439	829	21	1,459.3	12	1,447.5
Lewis	5,625	3,983	44	782.2	54	1,355.8
Lincoln	708	329	2	*	3	*
Mason	3,531	2,690	41	1,161.1	36	1,338.3
Okanogan	3,100	1,938	40	1,290.3	48	2,476.8
Pacific	1,388	802	21	1,513.0	11	1,371.6
Pend Oreille	870	405	10	1,149.4	3	*
Pierce	54,921	53,094	947	1,724.3	1,140	2,147.1
San Juan	744	453	2	*	4	*
Skagit	8,126	6,396	109	1,341.4	87	1,360.2
Skamania	755	426	8	1,059.6	4	*
Snohomish	45,240	40,013	511	1,129.5	252	629.8
Spokane	33,421	33,007	353	1,056.2	372	1,127.0
Stevens	3,365	1,663	22	653.8	25	1,503.3
Thurston	16,306	14,625	185	1,134.6	209	1,429.1
Wahkiakum	258	139	1	*	2	*
Walla Walla	4,878	5,270	40	820.0	26	493.4
Whatcom	14,420	18,570	156	1,081.8	175	942.4
Whitman	4,987	10,117	40	802.1	76	751.2
Yakima	18,773	16,078	335	1,784.5	361	2,245.3
STATE TOTAL	439,357	428,716	5,748	1,308.3	6,032	1,407.0

*Rates are not calculated from 0 to 4 cases because they are unreliable.

Table 3
Reported Gonorrhea Cases and Incidence Rates
By Sex and County

COUNTY	2003 POPULATION		GONORRHEA			
	MALE	FEMALE	MALE	RATE/100,000	FEMALE	RATE/100,000
Adams	8,485	8,115	4	*	0	0.0
Asotin	9,820	10,780	0	0.0	2	*
Benton	75,396	76,204	7	9.3	11	14.4
Chelan	33,827	34,073	1	*	1	*
Clallam	32,287	33,013	4	*	4	*
Clark	184,870	187,430	47	25.4	111	59.2
Columbia	2,001	2,099	0	0.0	0	0.0
Cowlitz	47,052	47,848	4	*	11	23.0
Douglas	16,663	16,937	1	*	2	*
Ferry	3,789	3,511	0	0.0	0	0.0
Franklin	27,996	25,604	0	0.0	2	*
Garfield	1,190	1,210	0	0.0	0	0.0
Grant	39,438	37,662	6	15.2	7	18.6
Grays Harbor	34,216	34,584	2	*	5	14.5
Island	37,062	36,938	13	35.1	10	27.1
Jefferson	13,254	13,446	1	*	1	*
King	885,652	893,648	957	108.1	394	44.1
Kitsap	120,124	116,876	39	32.5	52	44.5
Kittitas	17,494	17,706	3	*	4	*
Klickitat	9,639	9,661	1	*	1	*
Lewis	34,922	35,478	1	*	5	14.1
Lincoln	5,010	5,090	0	0.0	0	0.0
Mason	25,951	24,249	7	27.0	6	24.7
Okanogan	19,755	19,845	3	*	3	*
Pacific	10,366	10,534	4	*	0	0.0
Pend Oreille	5,932	5,868	0	0.0	0	0.0
Pierce	365,053	368,647	257	70.4	281	76.2
San Juan	7,226	7,574	1	*	1	*
Skagit	52,860	53,840	11	20.8	14	26.0
Skamania	4,987	4,913	0	0.0	0	0.0
Snohomish	319,084	313,416	82	25.7	57	17.9
Spokane	210,392	218,208	45	21.4	52	23.8
Stevens	20,233	20,367	3	*	2	*
Thurston	105,259	109,541	12	11.4	25	22.8
Wahkiakum	1,902	1,898	0	0.0	0	0.0
Walla Walla	28,413	27,387	0	0.0	2	*
Whatcom	86,029	88,471	19	22.1	38	43.0
Whitman	20,761	20,239	3	*	5	24.7
Yakima	112,820	113,180	49	43.4	58	51.2
STATE TOTAL	3,037,210	3,061,090	1,587	52.3	1,167	38.1

*Rates are not calculated from 0 to 4 cases because they are unreliable.

Table 4
Reported Gonorrhea Cases and Incidence Rates
By Age (15-24 Years) and County

COUNTY	2003 POPULATION		GONORRHEA			
	15-19	20-24	15-19	RATE/100,000	20-24	RATE/100,000
Adams	1,500	1,152	0	0.0	1	*
Asotin	1,508	1,169	2	*	0	0.0
Benton	12,340	9,170	6	48.6	4	*
Chelan	5,239	3,917	0	0.0	1	*
Clallam	4,459	3,045	2	*	4	*
Clark	26,667	23,041	23	86.2	43	186.6
Columbia	292	197	0	0.0	0	0.0
Cowlitz	6,892	5,637	1	*	4	*
Douglas	2,654	1,875	1	*	0	0.0
Ferry	686	340	0	0.0	0	0.0
Franklin	4,879	4,257	1	*	1	*
Garfield	203	78	0	0.0	0	0.0
Grant	6,689	5,366	0	0.0	7	130.5
Grays Harbor	5,203	3,763	2	*	2	*
Island	4,843	4,823	5	103.2	5	103.7
Jefferson	1,543	902	0	0.0	0	0.0
King	110,138	127,018	169	153.4	289	227.5
Kitsap	17,387	16,319	15	86.3	42	257.4
Kittitas	3,380	5,820	2	*	4	*
Klickitat	1,439	829	2	*	0	0.0
Lewis	5,625	3,983	1	*	4	*
Lincoln	708	329	0	0.0	0	0.0
Mason	3,531	2,690	2	*	3	*
Okanogan	3,100	1,938	3	*	2	*
Pacific	1,388	802	1	*	1	*
Pend Oreille	870	405	0	0.0	0	0.0
Pierce	54,921	53,094	128	233.1	158	297.6
San Juan	744	453	0	0.0	2	*
Skagit	8,126	6,396	13	160.0	7	109.4
Skamania	755	426	0	0.0	0	0.0
Snohomish	45,240	40,013	29	64.1	30	75.0
Spokane	33,421	33,007	20	59.8	30	90.9
Stevens	3,365	1,663	2	*	2	*
Thurston	16,306	14,625	10	61.3	9	61.5
Wahkiakum	258	139	0	0.0	0	0.0
Walla Walla	4,878	5,270	0	0.0	1	*
Whatcom	14,420	18,570	18	124.8	19	102.3
Whitman	4,987	10,117	1	*	6	59.3
Yakima	18,773	16,078	21	111.9	28	174.2
STATE TOTAL	439,357	428,716	480	109.3	709	165.4

*Rates are not calculated from 0 to 4 cases because they are unreliable.

Table 5
Reported STD Cases and Incidence Rates
By Disease and County

2003		CHLAMYDIA			GONORRHEA		
COUNTY	POPULATION	CASES	RATE/100,000	RANK	CASES	RATE/100,000	RANK
Adams	16,600	30	180.7	28	4	*	
Asotin	20,600	52	252.4	11	2	*	
Benton	151,600	348	229.6	19	18	11.9	21
Chelan	67,900	168	247.4	13	2	*	
Clallam	65,300	156	238.9	14	8	12.3	20
Clark	372,300	844	226.7	20	158	42.4	4
Columbia	4,100	1	*		0	0.0	
Cowlitz	94,900	196	206.5	24	15	15.8	16
Douglas	33,600	69	205.4	25	3	*	
Ferry	7,300	8	109.6	34	0	0.0	
Franklin	53,600	188	350.7	3	2	*	
Garfield	2,400	0	0.0		0	0.0	
Grant	77,100	216	280.2	8	13	16.9	15
Grays Harbor	68,800	153	222.4	21	7	10.2	22
Island	74,000	175	236.5	16	23	31.1	7
Jefferson	26,700	59	221.0	22	2	*	
King	1,779,300	5,169	290.5	6	1,351	75.9	1
Kitsap	237,000	671	283.1	7	91	38.4	5
Kittitas	35,200	90	255.7	9	7	19.9	12
Klickitat	19,300	35	181.3	27	2	*	
Lewis	70,400	141	200.3	26	6	8.5	23
Lincoln	10,100	6	59.4	36	0	0.0	
Mason	50,200	109	217.1	23	13	25.9	8
Okanogan	39,600	116	292.9	5	6	15.2	17
Pacific	20,900	37	177.0	29	4	*	
Pend Oreille	11,800	16	135.6	32	0	0.0	
Pierce	733,700	2,820	384.4	2	538	73.3	2
San Juan	14,800	10	67.6	35	2	*	
Skagit	106,700	270	253.0	10	25	23.4	9
Skamania	9,900	13	131.3	33	0	0.0	
Snohomish	637,500	1,467	230.1	18	139	21.8	11
Spokane	428,600	988	230.5	17	97	22.6	10
Stevens	40,600	59	145.3	30	5	12.3	19
Thurston	214,800	511	237.9	15	37	17.2	14
Wahkiakum	3,800	3	*		0	0.0	
Walla Walla	55,800	80	143.4	31	2	*	
Whatcom	174,500	436	249.9	12	57	32.7	6
Whitman	41,000	133	324.4	4	8	19.5	13
Yakima	226,000	953	421.7	1	107	47.3	3
STATE TOTAL	6,098,300	16,796	275.4	638	2,754	45.2	

*Rates are not calculated from 0 to 4 cases because they are unreliable.

Table 5 (cont.)
Reported STD Cases and Incidence Rates
By Disease and County

2003		PRIMARY & SECONDARY	EARLY LATENT	LATE LATENT	TOTAL ALL SYPHILIS	INITIAL HERPES	RATE/100,000
COUNTY	POPULATION						
Adams	16,600	0	0	0	0	4	*
Asotin	20,600	0	0	1	1	17	82.5
Benton	151,600	0	0	1	1	59	38.9
Chelan	67,900	0	2	1	3	19	28.0
Clallam	65,300	0	0	1	1	32	49.0
Clark	372,300	6	1	7	14	44	11.8
Columbia	4,100	0	0	0	0	0	0.0
Cowlitz	94,900	0	0	1	1	18	19.0
Douglas	33,600	0	0	1	1	9	26.8
Ferry	7,300	0	0	0	0	0	0.0
Franklin	53,600	1	0	3	4	10	18.7
Garfield	2,400	0	0	0	0	0	0.0
Grant	77,100	0	0	1	1	15	19.5
Grays Harbor	68,800	1	0	0	1	9	13.1
Island	74,000	0	0	0	0	20	27.0
Jefferson	26,700	0	0	0	0	7	26.2
King	1,779,300	60	24	50	134	688	38.7
Kitsap	237,000	0	0	6	6	64	27.0
Kittitas	35,200	0	0	0	0	9	25.6
Klickitat	19,300	0	0	0	0	3	*
Lewis	70,400	1	1	1	3	15	21.3
Lincoln	10,100	0	0	0	0	1	*
Mason	50,200	0	1	3	4	15	29.9
Okanogan	39,600	0	0	0	0	16	40.4
Pacific	20,900	0	0	0	0	2	*
Pend Oreille	11,800	0	0	0	0	4	*
Pierce	733,700	2	3	14	19	236	32.2
San Juan	14,800	0	0	0	0	2	*
Skagit	106,700	0	0	5	5	41	38.4
Skamania	9,900	0	0	0	0	0	0.0
Snohomish	637,500	8	3	10	21	268	42.0
Spokane	428,600	1	0	3	4	163	38.0
Stevens	40,600	0	0	0	0	6	14.8
Thurston	214,800	0	0	2	2	87	40.5
Wahkiakum	3,800	0	0	0	0	1	*
Walla Walla	55,800	0	0	1	1	15	26.9
Whatcom	174,500	0	0	0	0	80	45.8
Whitman	41,000	0	0	1	1	12	29.3
Yakima	226,000	2	1	8	11	82	36.3
STATE TOTAL	6,098,300	82	36	121	239	2,073	34.0
		Rate: 1.3	Rate: 0.6	Rate: 2.0	**Rate: 3.9		

*Rates are not calculated from 0 to 4 cases because they are unreliable.

Appendix

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